CLAIMS

We claim:

1. A method of reducing a column clock time in a liquid crystal display, comprising the steps of:

determining if a row has all unused pixels on a row;

driving all unused pixels on the row to black simultaneously; and

repeating the driving step on subsequent rows until a row with active video is detected.

2. The method of claim 1, wherein the unused pixels on the row or subsequent row are driven to black by applying a common DC voltage to the row or the subsequent row.

3. The method of claim 2, wherein the steps of driving all unused pixels on the row or any subsequent row comprises the steps of switching all pixels on the row or any subsequent row to a first voltage during the negative phase of a pixel and switching all pixels on the row or any subsequent row to a second voltage during a positive phase of the pixel until a row address selector reaches the active video row.

4. The method of claim 3, wherein the row address selector operates at a faster speed while incrementing through rows having all pixels being driven to black and operates at a slower speed while incrementing through rows having active video.

5. The method of claim 3, wherein the first voltage is 16 volts and the second voltage is 0 volts.

6. The method of claim 1, wherein the method further comprises the step of randomly accessing a start of a plurality of rows in the liquid crystal display.

7. A method of reducing a column clock time in a liquid crystal display, comprising the steps of:

driving all pixels on a given row to black by switching all pixels on the given row to a first voltage during a negative phase of a pixel until a row address selector reaches an active video row; and

driving all pixels on the given row to black by switching all pixels on the given row to a second voltage during a positive phase of the pixel until the row address selector reaches the active video row.

8. The method of claim 7, wherein the method further comprises the step of incrementing the row address selector and repeating the steps of claim 1 if a subsequent row has unused pixels until the address selector reaches the active video row.

9. The method of claim 8, wherein the method further comprises the steps of repeating the steps of claim 1 when the row address selector increments to another subsequent row having unused pixels.

10. The method of claim 7, wherein the row address selector operates at a faster speed while incrementing through rows having all pixels being driven to black and operates at a slower speed while incrementing through rows having active video.

11. The method of claim 7, wherein the first voltage is 16 volts and the second voltage is 0 volts.

12. The method of claim 7, wherein the method further comprises the step of randomly accessing a start in a plurality of rows in the liquid crystal display.

13. A method of reducing a column clock time in a liquid crystal display, comprising the steps of:

randomly accessing a starting row in a liquid crystal display imager having a plurality of rows; and

selectively addressing rows in the plurality of rows having active video and avoiding addressing rows in the plurality of rows having substantially all unused pixels.

14. The method of claim 13, further comprises the steps of driving all pixels on the rows having substantially all unused pixels to black by switching all pixels on the given row to a first voltage during a negative phase of the given pixel and switching all pixels on the given row to a second voltage during a positive phase of the pixel.

15. A liquid crystal display imager system, comprises:

an imager having a plurality of rows and the imager being coupled to a row address selector; and

a random access controller coupled to the row address selector that randomly accesses a row in the imager and avoids addressing rows in the imager having all unused pixels.

16. The liquid crystal display imager system of claim 15, wherein the liquid crystal display imager system further comprises a switching mechanism that drives all unused pixels on a given row to black simultaneously if the row in the imager has all unused pixels.

17. The liquid crystal display imager system of claim 16, wherein the row address selector progresses through all rows of the imager and the switching mechanism drives all unused pixels on any row having all unused pixels to black simultaneously until a row with active video is detected.

18. The liquid crystal display imager system of claim 16, wherein the switching mechanism drives the unused pixels on the row to black by applying a common DC voltage to the row.

19. The liquid crystal display imager system of claim 16, wherein the switching mechanism switches all pixels on the row having all unused pixels to a first voltage

during the negative phase of a pixel and switches all pixels on the row having all unused pixels to a second voltage during a positive phase of the pixel until the row address selector reaches an active video row.

20. The liquid crystal display imager system of claim 16, wherein the row address selector operates at a faster speed while incrementing through rows having all pixels being driven to black and operates at a slower speed while incrementing through rows having active video.

21. The liquid crystal display imager system of claim 15, wherein the system further comprises a sample and hold circuit coupled to the random access controller to enable the random access controller to detect rows having all unused pixels.

22. The liquid crystal display imager system of claim 15, wherein the system is for a liquid crystal on silicon crystal display.